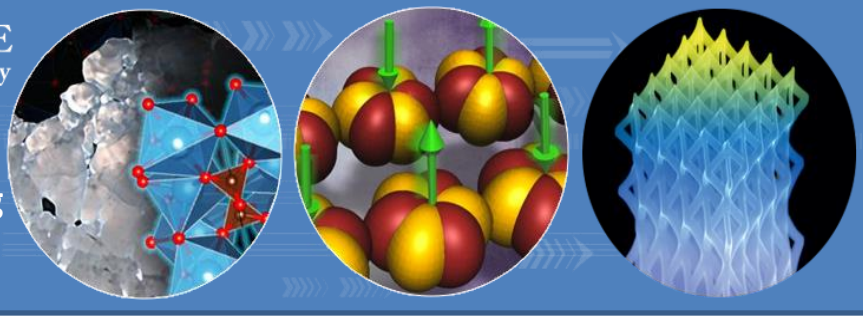
OAK RIDGE National Laboratory

2017 Joint Nanoscience and Neutron Scattering User Meeting



Synthesis and Collective Phenomena in 2D and Layered Materials

Monday, July 31, 2017

Organizers:

Kai Xiao (xiaok@ornl.gov), Center for Nanophase Materials Sciences, ORNL

Travis Williams, Spallation Neutron Source, ORNL

David Mandrus, Materials Science and Technology Division, ORNL/UTK

This workshop aims to facilitate and strengthen the synergistic strategy to pursue the latest developments in the controlled synthesis, advanced characterization, and various applications of 2D and layered materials. The CNMS and SNS at ORNL have expertise and state-of-the-art facilities in the controlled synthesis, advanced characterization, theoretical modeling, and functional applications of 2D and layered materials. This has led to a synergistic research program focused around the fundamental studies on physical properties in many aspects including optoelectronic, mechanical, spin and magnetic behaviors. This workshop will include topics covering intriguing collective phenomena of 2D and layered materials and heterostructures, their growth, characterization and device applications with corresponding computational modeling. In addition to fundamental significance, the workshop seeks to broaden the interest of community in the rapidly developing and complementary capabilities of CNMS and SNS for the study of 2D and layered materials, including integration with elastic and inelastic neutron scattering techniques. Tours of relevant facilities will be arranged for both SNS and CNMS.

The topics of the workshop include but are not limited to:

- Controlled synthesis and advanced characterization of 2D materials.
- Heterogeneity in 2D materials including defects, dopants, interfacial interactions and substrate effects.
- Predictive modeling and theoretical simulation of 2D materials.
- Application of neutron scattering to 2D materials.

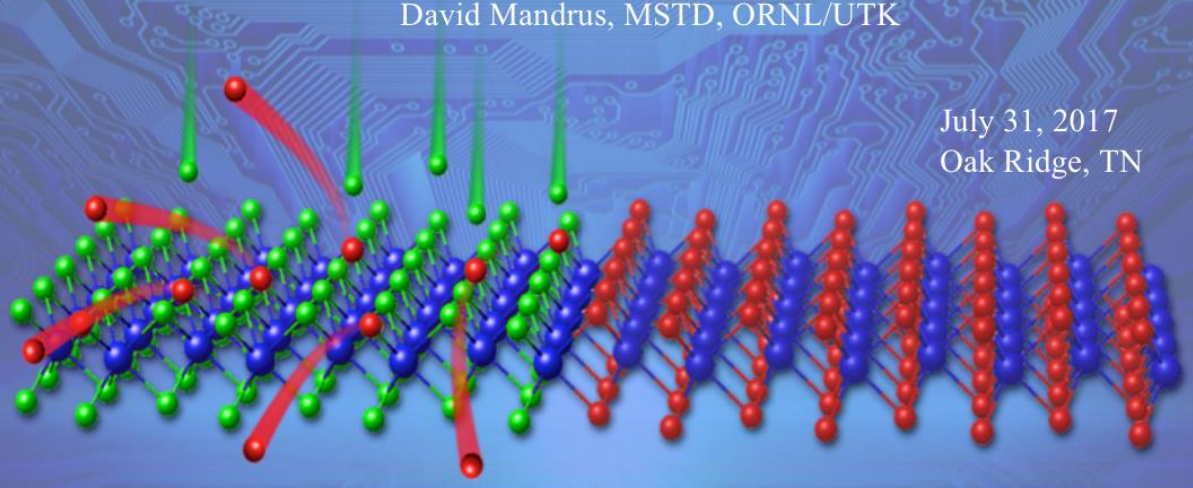
Abstracts of original contributions will be considered by the organizers for oral presentation during the workshop. If you're interested in submitting an abstract, please contact Kai Xiao (xiaok@ornl.gov) for more information.

CNMS-SNS user meeting workshop

Synthesis and Collective Phenomena in 2D and Layered Materials

Organizers: Kai Xiao, CNMS, ORNL
Travis Williams, SNS, ORNL
David Mandrus, MSTD, ORNL/UTK

July 31, 2017
Oak Ridge, TN



OAK RIDGE National Laboratory | CENTER FOR NANOPHASE MATERIALS SCIENCES | SPALLATION NEUTRON SOURCE